

## METHODS OF TREATING DISEASES RESPONSIVE TO INDUCTION OF APOPTOSIS AND SCREENING ASSAYS

### ABSTRACT OF THE DISCLOSURE

The present invention pertains to a method of treating, preventing or ameliorating a disease responsive to induction of the caspase cascade in an animal, comprising administering to the animal a compound which binds specifically to one or more Apoptosis Inducing Proteins (AIPs). AIPs include Transferrin Receptor Related Apoptosis Inducing Proteins (TRRAIPs), Clathrin Heavy Chain Related Apoptosis Inducing Proteins (CHCRAIPs), IQ motif containing GTPase Activating Protein Related Apoptosis Inducing Proteins (IQGAPRAIPs), and Heat Shock Protein Related Apoptosis Inducing Proteins (HSPRAIPs). The present invention also relates to screening methods useful for drug discovery of apoptosis inducing compounds. In particular, the screening methodology relates to using AIPs as a target for the discovery of apoptosis activators useful as anticancer agents. The screening methods of the present invention can employ homogenous or heterogenous binding assays using purified or partially purified AIPs; or whole cell assays using cells with altered levels of one or more AIPs. The invention also contemplates use of gambogic acid or GA-related compounds which bind AIPs and can accordingly be used to raise antibodies useful for drug discovery. Alternatively, labeled GA is used for competitive binding assays for drug discovery. Such assays afford high throughput screening of chemical libraries for apoptosis activators.